

# KNOWLEDGE, ATTITUDE AND PRACTICE OF CUPPING (HIJAMAH) THERAPY AMONG PATIENTS VISITING PRIMARY HEALTH CENTERS IN TABUK CITY, KSA 2023-2024

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## Abstract

**Background:** Cupping therapy (in Arabian "Hijamah") has been used in many civilizations throughout the years from the ancient ages up till the present time with good benefits for some patients.

**Objectives:** To assess the knowledge, attitude and practice of the population in Tabuk City, about Hijamah and its therapeutic benefits.

**Materials and Methods:** A cross-sectional study was conducted in six primary healthcare centers in Tabuk city, northwest of Kingdom of Saudi Arabia, through the period of one year (June 2023- May 2024). It included adult patients aged between 20-70 years. Self-administered questionnaire in Arabic language was distributed to participants. It was divided in to four main parts (demographic data, knowledge, attitude and practice of the participants).

**Results:** The study included 416 adults. Their age ranged between 20 and 70 years; with most of them (81.3%) aged below 50 years (81.3%). All of the participants have heard about cupping as one of the useful methods of therapy, however, the two main resources of information were friends/relatives (61.1%) and social media/internet (32%). Apparently, most of them believed that Hijamah is a kind of treatment for many common diseases (76.7%), and is an efficient treatment (83%); however, only 50% believed that it has prolong efficiency in many diseases such as headaches, blood circulation, back and neck pain, arthritis, and detoxify of the body. As for practicing or applying Hijamah therapy, it is found that (78.8%) of participants or their friends or relatives have experienced it. However, this therapy was not used to treat chronic diseases (63.5%), more than half (56%) were not cured completely from their disease, or the disease return back after some time. Yet, (68%) of them are ready to repeat the experience of Hijamah once again. Generally, (87.5%) of the participants encourage the idea of having Hijamah clinics inside medical centers, especially inside the governmental hospitals, and primary health centers, as most of the Hijamah clinics (93.5%) are private.

**Conclusion:** The knowledge and attitude toward Hijamah therapy were positive and considerable. However, there is a need of doing more researches about the efficiency of Hijamah therapy on patients on terms of period of effect and other researches about its efficiency on treating chronic diseases of genetic origin.

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## Introduction

For thousands of years, the practice of hijamah therapy has been part of Middle-Eastern culture back to the time of Hippocrates (400 BC). Ancient Egyptians were the first to use cupping therapy, and the oldest recorded medical textbook, Ebers Papyrus, written in 1550 BC in Egypt mentions cupping.<sup>1</sup>

Muslim countries, believe on Prophet Mohammed's (peace and blessings be upon him) Hadith (sayings), and we are sure that one day the researches will reveal many benefits of cupping for the human body, same as to what was discovered about the benefits of honey, which was also mentioned in the prophet's hadith.

Recently, evidence of very low-to-moderate quality indicated that cupping therapy is effective in managing many conditions including knee osteoarthritis, chronic low back pain, neck pain, and herpes zoster. Furthermore, it is considered a safe, effective and promising non-pharmacological therapy that needs wider promotion.<sup>2</sup>

Acupuncture and acupressure show great similarity with wet cupping therapy as regards the principle. Wet cupping involves the letting of blood whereas acupuncture and acupressure utilize suction and stimulation of points to attain the desired results. Letting out blood is in fact among the oldest of acupuncture techniques.<sup>3,4</sup>

According to the WHO global report on Traditional & Complementary Medicine 2019, majority of the members (80%) acknowledged practicing traditional and complementary medicine among their patients.<sup>5</sup> C therapy is a common practice in Saudi Arabia as two Studies revealed that 35.7% and 45.4% of the population had undergone cupping therapy.

Cupping therapy has no major side effects aside from minimal discomfort due to the method of application of skin cuts to the patient. In cases where the patient's pain threshold is low, a local anaesthetic can be administered. Also other possible minor side effects that may occur is the feeling of slight light headache post cupping therapy, this again is similar to the sensation one feels after having had blood taken from the doctor, as cupping therapy encourages blood flow to the cupped region (hyperaemia), one may therefore feel warmer and hotter as a result of vasodilatation taking place and slight sweating may

occur. Again this can be attributed to sound scientific rationale and there is no cause for concern.<sup>3, 8-10</sup>

This study aims to assess the knowledge, attitude and practice of Hijamah among general population and explore its benefits as one of the oldest treatment therapy all around the world.

## Subjects and methods

This is a cross-sectional study conducted among male and female adult patients, aged between 20-70 years old attending six primary healthcare centers in Tabuk city through the period from June 2023 to May 2024.

Due to the lack of information about knowledge, attitude, and practice of cupping therapy among Saudi population, it was assumed that 50% of patients have acceptable level of knowledge. Using 5% acceptable limit at 95% confidence interval (CI), the minimum required sample size was 416 patients. There are six main remarkable primary health centers in Tabuk city: Al Sulaimaniah Primary Health Center, Al Nahdi Primary Health Center, Al Rawdha Primary Health Centre, Al Saadah Primary Health Center, Al Faisaliah Primary Health Center, and Al Shamali Primary Health Center. Those primary healthcare centers were selected based on the fact that they are the most crowded centers in Tabuk.

Patients were selected from the first four centers, while 70 patients were selected from the last above two centers to complete the total sample size. A systematic random sampling technique was adopted to select patients from each center as every patient visited any of the six primary health care centers throughout the study period will be eligible to participate in the study.

Self-administered questionnaire was answered by participants. This questionnaire included demographic information, knowledge, attitude, and practice of cupping therapy among participants. Two expert consultants of Community and Family Medicine tested validity by distributing the questionnaire to five random participants.

Study proposal was approved by the ethical research board of Tabuk University, College of Medicine (No: TU-077/023/203); dated 14 June, 2023. In addition, written and signed consents were obtained from participants.

Statistical Package for Social Sciences (SPSS) software version 28 was utilized for data entry and analysis. Categorical variables were presented as frequencies and percentages whereas continuous variables were presented as arithmetic mean and standard deviation. Participants' knowledge score regarding cupping

therapy was calculated as follow; the participants were asked to answer seven questions about diseases treated by cupping, usage of cupping in old ages, procedures, types, mechanism, timing, and body location of performance. Right answer was given the lowest score. The overall score was calculated in the way that the lowest the score, the higher the knowledge regarding Hijamah (the score ranged between 7 and 35). Participants' attitude score toward Hijamah was calculated as follows; the participants were asked to answer ten questions regarding effectiveness, prevention, benefits, differences in relation to blood donation, treatment of chronic diseases, relation to infectious diseases, right performance of cupping, and dependability of cupping in dealing with some diseases for males and females. Positive attitude was given the lowest 1 and 5 was the negative score. The overall attitude score was calculated in the way that the lower the score, the high positive attitude toward cupping therapy (the score ranged between 10 and 50). Bi-variate analysis of mean of cupping therapy knowledge and attitude scores with regard to independent variables was done by one-way analysis of variance (ANOVA) statistical tests for comparison of more than two groups. Least significance difference test (LSD) test was used for post hoc comparisons. Chi-square test was applied to test for the association and/or the difference between two categorical variables. Significance was determined at  $p$ -value  $< 0.05$ .

### Results

The study included 416 adult male and female patients. Their ages ranged between 20 and 70 years. Their sociology-demographic characteristics are presented in Table 1. More than two-thirds of them aged below 50 years ( $n=338$ ; 81.2%). Slightly more than half of them ( $n=246$ ; 59.2%) are university graduated and postgraduate. More than half of them ( $n=234$ ; 56.3%) are working. As appeared in Table 1, Almost all of the population of Tabuk city ( $n=415$ ; 99.8%) have heard about cupping as one of the useful methods of therapy, however, this knowledge has come from two main resources that ( $n=61.1\%$ ) participants have their information from their friends and relatives

Demographic characteristics	Frequency	Percentage
<b>Gender</b>		
Male	198	47.6
Female	218	62.4
<b>Age (years)</b>		
20-30	121	29.1
31-40	130	31.2
41-50	87	20.9
51-60	54	13.0
61-70	24	5.8
<b>Educational level</b>		
Illiterate	16	3.8
Elementary school	17	4.1
Intermediate school	40	9.6
Secondary school	97	23.3
University	185	44.5
Postgraduate	61	14.7
<b>Job status</b>		
Not working	79	19.0
Working	234	56.3
Retired	30	7.2
Students	73	17.5

**Table 1.** Demographic characteristics of the study group ( $n=416$ ).

**Table 2.** Participants' responses to knowledge statements of cupping therapy ( $n=416$ ).

Entirely untrue	Untrue	Not sure	TRUE	Entirely true	Statements
N (%)	N (%)	N (%)	N (%)	N (%)	
2 (0.5)	21 (5.0)	74 (17.8)	166 (39.9)	153 (36.8)	Cupping is used to treat many diseases such as; respiratory diseases, arthritis, headaches, high blood pressure, improve blood circulation, relieve back and neck pain, rheumatism, and detoxify the body.
1 (0.2)	4 (1.0)	25 (6.0)	137 (32.9)	249 (59.9)	Cupping / Hijamah is one of the ancient folk remedies that are still used today.
0 (0%)	5 (1.2)	39 (9.4)	152 (36.5)	220 (52.9)	Cupping / Hijamah is making cuts in certain areas of the body with the aim of removing bad blood to stimulate blood circulation.
7 (1.7)	34 (8.2)	168 (40.4)	100 (24.0)	107 (25.7)	Types of cupping: wet and dry.
5 (1.2)	39 (9.4)	65 (15.6)	151 (36.3)	156 (37.5)	Among the cupping mechanism is the use of so-called air cups.
0 (0%)	23 (5.5)	150 (36.1)	111 (26.7)	132 (31.7)	There are certain days in the Hijri month for cupping, which are 17-19-21 of every month.
38 (9.1)	109 (26.2)	149 (35.8)	77 (18.5)	43 (10.3)	Cupping can be done on any part of the body

while ( $n=133$ ; 32%) from social media and internet. Figure 1

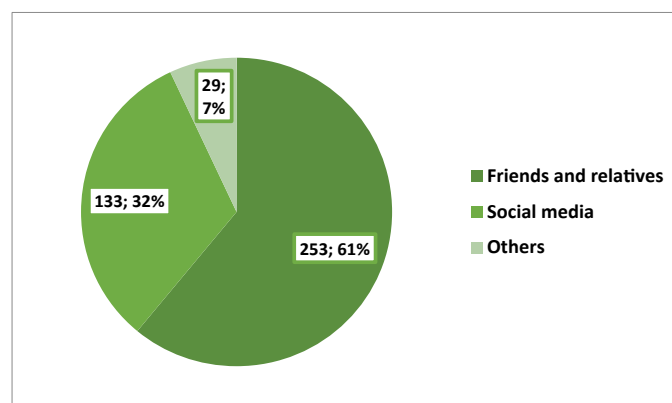
As illustrated in Table 2, most of the participants ( $n=319$ ; 76.7%) approved that Hijamah is used to treat many diseases such as; respiratory diseases, arthritis, headaches, high blood pressure, improve blood circulation, relieve back and neck pain, rheumatism, and detoxify the body. Majority ( $n=386$ ; 92.8%) of the participants believe that cupping is one of the ancient therapy methods that is still used up to date. Also, majority ( $n=372$ ; 89.4%) of them know about cupping process that is making slight wounds on the skin of certain areas in the body to allow blood to get out giving the chance for activating the blood circulation process. Nearly half of the participants ( $n=207$ ; 49.7%) agreed that cupping therapy is either wet or dry. Most of the participants ( $n=307$ ; 73.8%) could recognize that among methods of Hijamah, there is a technique called air cups. More than half ( $n=243$ ; 58.4%) agreed that days 17, 19 and 21 of the Hijri month are suitable for performing Hijamah. Almost a third ( $n=147$ ; 35.3%) of the participants disagreed that cupping can be done in any part of the body.

### Attitude towards cupping therapy

As shown in Table 3, participants extremely believed or believed that cupping has preventive characteristics that may help in avoiding some diseases (18% and 39.9% respectively). They considered that Hijamah is an effective type of treatment (83.9%). Generally, participants have positive attitude toward cupping therapy. Half of them (50%) believed that Hijamah has long term benefits and majority (97.2%) of them considered it as useful as blood donation due to the benefits of donation in generating blood cells. Most of the participants (80.7%) believed that cupping therapy need to be deeply researched to discover the hidden additional benefits that are still uncover are equally divided between agreed and disagreed (28.3 % and 27.2% respectively). Participants did not believe that cupping may transmit infectious diseases (33.7%), while (37.9%) agreed that cupping may transmit infection. Participants also do not believe that any person can perform Hijamah in the right way (68.6%). Participants agreed that they will treat themselves by Hijamah in case they have a disease that is not cured by traditional treatment (41.6%). However, 20.2% will not resort to hijamah, while (38.2%) are not sure (68.6%). Participants showed clearly that Hijamah is suitable for both genders (74.1%).

### Practice of cupping therapy

More than two-thirds of the participants (328; 78.8%) have personal experience with Hijamah or experience of Hijamah among their friends or relatives.



**Figure 1.** Source of knowledge about Hijamah among Saudi population in Tabuk City ( $n=415$ ).

**Table 3.** Participants' answers about their attitude towards cupping therapy (n=416).

	Entirely true N(%)	True N(%)	Not sure N(%)	Untrue N(%)	Entirely untrue N(%)
Do you think cupping helps prevent some diseases?	75 (18.0)	166 (39.9)	122 (29.3)	36 (8.7)	17 (4.1)
Do you believe that cupping is one of the effective types of treatment?	106 (25.5)	243 (58.4)	55 (13.2)	7 (1.7)	5 (1.2)
Do you think cupping has a long-term benefit?	70 (16.8)	139 (33.4)	152 (36.6)	47 (11.3)	8 (1.9)
Do you think there is a difference between blood donation and cupping?	139 (33.4)	165 (39.7)	77 (18.5)	32 (7.7)	3 (0.7)
Do you think that cupping therapy needs to be deeply researched and studied to discover its hidden benefits?	161 (38.7)	174 (41.9)	62 (14.9)	18 (4.3)	1 (0.2)
Do you think that cupping can treat diseases of the present time, such as rheumatism, diabetes and high blood pressure, for example?	36 (8.7)	82 (19.7)	185 (44.4)	94 (22.6)	19 (4.6)
Do you think cupping has a role in transmitting infectious diseases?	62 (14.9)	95 (22.8)	119 (28.6)	113 (27.2)	27 (6.5)
Do you think anyone can do cupping the right way?	18 (4.3)	50 (12.0)	63 (15.1)	152 (36.6)	133 (32.0)
if you suffer from a disease, God forbid, will you resort to cupping as a means of treatment?	48 (11.5)	125 (30.0)	160 (38.6)	55 (13.2)	28 (6.7)
Do you think cupping can be used as a treatment for males and females?	114 (27.4)	194 (46.7)	81 (19.5)	21 (5.0)	6 (1.4)

**Table 4.** Practicing Hijamah and its effect as well as availability of this kind of therapy (n=416).

	Yes N(%)	No N(%)
Have you or one of your relatives or friends tried to be treated by cupping?	328 (78.8)	88(21.2)
Was the disease that you or your relatives treated for- has a medicinal or chronic nature?	152(36.5)	264(63.5)
Did you completely recover from the disease you were suffering from, or did your symptoms return after a period of time?	180(43.3)	236(56.7)
Are you or your cupping maker ready to try cupping therapy again?	283(68.0)	133(32.0)
Have you heard of any specialized center for cupping therapy?	383(92.1)	33(7.9)
If the answer is yes, is this center governmental or private?	27(6.5)	389(93.5)
Do you support the presence of cupping clinics in health centers in general?	364(87.5)	52(12.5)

However, more than half of them (264; 63.5%) reported that those diseases treated by Hijamah were not chronic diseases. Those who were treated by Hijamah (180; 43.4%) of them completely recovered, but (236; 56.7%) did not benefit or did not completely recovered. Yet, (283; 68%) of the participants are willing to be treated by hijamah again. Participants are familiar with the hijamah therapy centers (383; 92.1%), but, those centers are (389; 93.5%) private centers not governmental. Only, (27; 6.5%) have visited governmental clinics or centers. (364; 87.5%) generally support the idea of establishing hijamah clinics in health centres Table 4.

As shown in Table 5, Hijamah therapy knowledge score was significantly higher among participants of post graduate studies or university graduate than those illiterate, elementary, preparatory, and secondary school level ( $12.17 \pm 3.11$  and  $13.53 \pm 3.69$  Vs.  $17.42 \pm 2.24$ ,  $19.59 \pm 3.45$ , and  $16.58 \pm 3.87$  respectively),  $p=0.001$ . Similarly, knowledge score was significantly higher among employed and students than unemployed and retired participants ( $14.00 \pm 4.07$ ,  $13.87 \pm 3.37$  vs  $16.79 \pm 4.26$ , and  $15.03 \pm 4.12$  respectively),  $p=0.012$ . As for age, the knowledge score was highly significant for participants aged 61-70 years old than those younger from 51-60 years old ( $18.33 \pm 3.41$  vs  $13.64 \pm 3.41$ ),  $p=0.001$ . As well as the knowledge score was highly significant among participants who got their information about hijamah from their friends and relatives than those who got from physicians, books, or TV ( $15.50 \pm 4.23$  vs  $10.12 \pm 1.55$ ,  $12.65 \pm 3.43$ , and  $13.90 \pm 3.75$ ),  $p=0.001$ .

Table 6 shows that Hijamah attitude score was significantly higher among participants of elementary and preparatory school than those of university and post graduate study ( $28.84 \pm 4.62$ , and  $27.25 \pm 4.52$  VS  $22.88 \pm 4.13$  and  $24.64 \pm 5.37$  respectively),  $p=0.001$ . Similarly, the attitude score is highly significant among participants whose source of information was their friends or relatives, then those who got their information from physicians ( $26.28 \pm 4.91$  VS  $19.00 \pm 4.14$ ) As for the factors of age and working situation of the participants, they are not related to their attitude toward hijamah therapy,  $p=0.012$ .

### Discussion

"Hijamah" therapy which is the Arabic word of cupping therapy was one of the famous conventional therapies which was useful to the extent that people who tried it encourage others doing it.11 In this study we are going to reveal results and interpretation of knowledge, attitude and practice of Hijamah in terms of social and cultural aspect as well as benefits to general health.

In Makkah province, Saudi Arabia (2016),12 the first study of knowledge, attitude, and practice was done. It concluded that hijamah knowledge was sufficient, but more training is needed for practicing it as it showed good compatibility in reducing pain, in addition to its effect on treating diseases such as arthritis, head and neck pain.

The present study focused on North West region of Saudi Arabia where a wide desert and lot of people are living in cities mixing with tribes of this region who have their own folk therapies. In Tabuk city there are many primary care centres. We chose the busiest six health centres which help in achieving the aim of the study that is to know knowledge, attitude, and practice of Tabuk city population.

The population of this study is nearly equally divided between male and female participants. Most of them are under 50 years old, well-educated and employed. Two thirds of them heard of Hijamah from their relatives and friends, but not through their physicians. In addition, the social communication between people of this region revealed that Hijamah therapy is effective in treatment of back pain, headache, and neck pain, arthritis, respiratory diseases, rheumatism, and improve blood circulation.

However, despite of its temporary improvement, this study showed that some chronic diseases such as diabetes with all types, high blood pressure, and arthritis are neither prolonged improvement nor complete cure. This result suggests that more researches on the effect of Hijamah on chronic diseases of genetic origin need to be done.

In general, knowledge about the technique of Hijamah is known to participants such as method, process, types of Hijamah and different techniques. However, details are unknown and unclear to participants.13

Nearly a third of participants in the present study did not have clear information about details of Hijamah therapy such as types, techniques and days of practicing it during the Hijri Month. Another third of them were not sure about whether Hijamah is wet or dry, not sure whether hijamah includes air-cups. Also were not sure about the exact days of performing it. They also were not sure about the location of performing hijamah in the body.

This uncertainty in one third of knowledge questions revealed that the knowledge about Hijamah was not an academic educational one. It was folk therapy transferred from generation to generation among Hijamah practitioners only. We can suggest that Hijamah need to be learned academically

**Table 5.** Factors affecting knowledge score of the participants about cupping therapy (7-35).

	Mean	SD	P value*
Age in years			
20-30 (121)	14.29	3.62	**0.001
31-40 (130)	14.69	3.80	
41-50 (87)	14.32	4.57	
51-60 (54)	13.64	4.16	
61-70 (24)	18.33	3.41	
Education			
Illiterate (16)	17.42	2.24	**0.001
Elementary School (40)	19.59	3.45	
Preparatory school (17)	16.58	3.87	
Secondary School (97)	15.30	4.33	
University (185)	13.53	3.69	
Post Graduate Studies (61)	12.17	3.11	
Job			
Not working (79)	16.79	4.26	*0.012
Employed (234)	14.00	4.07	
Retired (30)	15.03	4.12	
Student/Volunteer (73)	13.87	3.37	
Source of Information about Hijamah			
Physicians (2)	10.12	1.55	0.001**
Friends or relatives (254)	15.50	4.23	
Social media (133)	13.55	3.87	
Books, Magazines, and Newspapers (24)	12.65	3.43	
TV or Radio (3)	13.90	3.75	

SD: Standard deviation

\*One-way analysis of variance (ANOVA) test

**Table 6.** Factors affecting attitude score of the participants towards cupping therapy (10-50).

	Mean	SD	P value*
Age in years			
20-30 (121)	24.82	4.31	>0.05
31-40 (130)	24.92	5.44	
41-50 (87)	25.25	4.89	
51-60 (54)	24.92	5.42	
61-70 (24)	27.95	4.29	
Education			
Illiterate (16)	26.84	4.62	0.001**
Elementary School (40)	28.97	3.16	
Preparatory school (17)	27.25	4.52	
Secondary School (97)	25.62	4.95	
University (185)	24.64	5.37	
Post Graduate Studies (61)	22.88	4.13	
Job			
Not working (79)	26.19	5.62	>0.05
Employed (234)	24.93	5.09	
Retired (30)	26.48	4.17	
Student/Volunteer (73)	24.28	4.27	
Source of Information about Hijamah			
Physicians (2)	19.00	4.14	*0.012
Friends or relatives (254)	26.28	4.91	
Social media (133)	23.46	4.76	
Books, Magazines, and Newspapers (24)	24.67	5.28	
TV or Radio (3)	26.50	7.05	

to health specialties such as family medicine, community medicine, substitute medicine, or even emergency medicine if needed. Since this kind of therapy is still proving its efficiency from old times till the present time, it seems that it needed to be more researched upon.

As for the attitude of Hijamah in general, people have positive attitude towards Hijamah because it reveals improvement in general health. It has long term benefits and usefulness in blood circulation, headache, migraine, and even sciatica pain. Most of the participants call for more researches to

be done about the exact benefits of hijamah to uncover the hidden benefits; particularly in chronic diseases of genetic origin. In this study it was not clear whether Hijamah cause blood born infectious diseases including human immunodeficiency virus, hepatitis B, and hepatitis C infections,14-16 which also need a research, specialized in hijamah application on infectious diseases. What is obvious in this study that people have trust in Hijamah therapy, therefore, they will resort to it if the traditional treatment did not work and that attitude is adopted by both genders.

What is interesting in this study in that although hijamah's hidden benefits were not revealed clearly, and despite that Hijamah did not cure chronic diseases completely, yet people are willing to be treated again. This fact proves that hijamah therapy has benefits for the health in general. It might improve other parts of the body such as blood circulation, muscle activation, pain relieving, or even psychological positive effect.17-19 This study informed us that in Tabuk region most of Hijamah centres are private, and people hope to have a governmental hijamah centres.

This study also showed that knowledge score is highly significant among post graduate and university graduate, employed participants, and students that reflects the society is well educated about health. What is also interesting is the participants aged from 51-70 were well educated about Hijamah. That can be interpreted that Hijamah was one of the famous old folk therapies which has proven its efficacy during ages of years, that is why older people have good knowledge about Hijamah.

This study gives a clear picture about the Saudi Arabian society, where it reveals clearly the positive impact of hijamah on the Saudi population.

This study was limited to population information about Hijamah therapy in terms of knowledge, attitude, and practice. However, the results implied that so many findings can be searches for under the topic of hijamah therapy. As this study was cross sectional more attention should be paid to define the conclusion regarding cause and effect relationship.

### Conclusion

The knowledge of and attitude toward Hijamah therapy among Tabuk city population were adequate and positive. However, there is a need for more researches about the efficiency of Hijamah therapy on patients in terms of period of effect and other researches about its efficiency on treating chronic diseases of genetic origin. Then depending on the results of the coming researches, the idea of having governmental clinics of hijamah in primary health centers will be welcomed.

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